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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Ed H. Frank

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EXAMINER

CHEA, PHILIP J

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/658,514	Applicant(s) FRANK ET AL.	
	Examiner PHILIP J. CHEA	Art Unit 2453	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

This Office Action is in response to an Amendment filed January 29, 2009. Claims 1-36 are currently pending. Any rejection not set forth below has been overcome by the current Amendment.

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 19-36 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The language of the claim raises a question as to whether the claim is directed merely to an abstract idea that is not tied to a technological art, environment or machine which would result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101. In this case, the claimed limitations of a receiver and controller may be construed as software per se. In Applicants Specification page 21, paragraph 60, it says that components of a switch may include suitable circuitry and/or software. Paragraph 62, mentions the receiver and controller components. Since the components can be implemented solely using software, the claims are rejected as being non-statutory subject matter.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-7,9-16,18-25,27-34,36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ayyagari et al. (US 2001/0024434), herein referred to as Ayyagari, and further in view of Singhal et al. (US 2002/0165990), herein referred to as Singhal.

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As per claims 1,10,19,28, Ayyagari discloses a method for providing network management in a hybrid wired/wireless local area network, the method comprising:

receiving at a network device, from one or both of a first access point and/or a first switch, a first messaging protocol message containing quality of service (QoS) information (see paragraph 48, *showing how a router i.e. network device, receives QoS request from access pointer [200]*);

responsive to said first messaging protocol message, determining at least a minimum QoS level for operation of one or more of said first switch, said first access point, a second access point, and /or a second switch (see paragraph 50, *showing how the network device i.e. router, determines if there are sufficient resources to honor the requested quality of service i.e. minimum QoS level, by using the assistance of a resource database*); and

distributing by said network device, QoS information corresponding to said determined at least a minimum QoS level to one or more of said first switch, said first access point, said second access point and/or said second switch, using a second messaging protocol message (see paragraphs 59 and 60, *showing how QoS is distributed by said network device by passing along information i.e. second messaging protocol, whether the QoS request has been denied or by sending an acknowledgement message back to the starting node; and since the router is along the path of nodes it is implied that the router is at least part of the distributing of the QoS information*).

Although the system disclosed by Ayyagari shows substantial features of the claimed invention (discussed above), it fails to disclose that the second messaging protocol is different from the first messaging protocol.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by Ayyagari, as evidenced by Singhal.

The system of Ayyagari shows in Fig. 2 that an access point [200] is connected to a router [235] to provide a wireless first message protocol and wired second message protocol. In an analogous art, Singhal discloses a network device that has both a wireless interface and a wired interface to enable short range wireless access points to participate within a coordinated networked environment (see Fig. 2

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and Abstract). Singhal further discloses the need to have wireless and wired capability in an access point that can enforce quality of service metrics (see paragraph 6).

Given the teaching of Singhal, a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Ayyagari by employing a network device that can provide a first messaging protocol and a second messaging protocol where the first wireless messaging protocol is different than the wired second messaging protocol, such as disclosed by Singhal, in order to communicate quality of service information to wireless network and wired networks from a single device.

In considering the second messaging protocol being different than the first messaging protocol, the router and access point disclosed in Ayyagari would be a single device with both wireless access point and wired router capabilities. Since the device of Singhal is able to communicate using both messaging protocols, one of ordinary skill in the art would have found it obvious for the network device to send/receive QoS messages from a wireless or wired node. Therefore, if a wireless message was being sent from a wireless node to the network device, and the network device passes messages to a wired node, the second messaging protocol would be different than the first.

As per claims 2,11,20,29, Ayyagari further discloses providing access to at least one of a plurality of access devices based on said distributed QoS information (see paragraphs 59-60, *describing denying the request if there are not enough resources to support the QoS request or allowing access if there are sufficient resources*).

As per claims 3,12,21,30, Ayyagari further discloses queuing traffic associated with at least one of said plurality of access devices to maintain said determined at least a minimum QoS level (see paragraph 56).

As per claims 4,13,22,31, Ayyagari further discloses prioritizing said traffic associated with at least one of said plurality of access devices to maintain said determined at least a minimum QoS level (see paragraph 54).

As per claims 5,14,23,32, Ayyagari further discloses scheduling access by at least one of said plurality of access devices to at least one of said first and second access points (see paragraph 31, *showing a scheduling of higher priority packets before lower priority packets*).

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As per claims 6,15,24,33, Ayyagari further discloses distributing said QoS information to at least a portion of the hybrid wired/wireless local area network (see paragraph 48).

As per claims 7,16,25,34, Ayyagari further discloses allocating bandwidth to maintain said at least a minimum QoS level (see paragraphs 17-18).

As per claims 9,18,27,36, Ayyagari further discloses that each of said first and second messaging protocol messages comprises at least one message selected from the group consisting of an access point status message, access point configuration message, a switch status message, a switch configuration message, a client status message and a device discovery message (see paragraph 59, *showing the access point status message of implied by informing previous nodes all the way up to the starting node of QoS request status and since starting node can be laptop see paragraph 48, it is implied that the access point will be one of the nodes to give a status message*).

4. Claims 8,17,26,35, are rejected under 35 U.S.C. 103(a) as being unpatentable over Ayyagari-Singhal as applied to claims 1,10,19,28 above, and further in view of Matta et al. (US 2003/0142651), herein referred to as Matta.

Although the system disclosed by Ayyagari-Singhal shows substantial features of the claimed invention (discussed above), it fails to disclose balancing a load on one or both of said first switch, said first access point, said second access point and/or said second switch to maintain said at least a minimum QoS level.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by Ayyagari-Singhal, as evidenced by Matta.

In an analogous art, Matta discloses estimating QoS for making a handoff trigger decision for a remote terminal in a wireless IP network (see Abstract). Matta further discloses balancing load among a plurality of access points based on QoS that the access points can provide (see paragraph 106).

Given the teaching of Matta, a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Ayyagari-Singhal by employing load balancing,

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such as disclosed by Matta, in order to avoid an unusually higher performance base station to be overwhelmed by handoffs, especially under the case of several remote terminals.

Response to Arguments

5. Applicant's arguments filed January 29, 2009 have been fully considered but they are not persuasive.

A) Applicant contends that the receiver 406 is at least a partially physical layer device and that the claimed receiver is the receiver 406.

In considering A), the Examiner respectfully disagrees. Applicants specification page 21, paragraph 60, says that components of a switch include suitable circuitry and/or software. It is unclear if the claimed receiver is supposed to include the suitable circuitry along with software. That is, it is not clearly claimed the receiver is a physical hardware device. The Examiner appreciates the Applicant pointing out the device in Figure 4. However, the claimed limitation does not necessarily reflect the device in Figure 4 that contains a hardware component.

B) Applicant contends that the SBM is an integrated functional part of the access point 200 and the router 235.

In considering B), the Examiner concedes that the SBM can be a function of the access point. However, the Examiner believes the router, is a separate device from the access point. The access point sends a message requesting QoS to a router 235. Router 235 is not equivalent to SBM 240. Therefore, the rejection stands with the router considered as the network device, receiving a protocol message from an access point. Furthermore, the Examiner does not agree that Ayyagari discloses the SBM as a functional part of the router. The Applicant has not provided any evidence that the access point [200], SBM [240], and router [235] are the same device. Even if they were the same device, an internal message sent from the access point to the router would still meet the limitation of the claims since it is not claimed that the receiving network device is separate from the first access point and/or switch.

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C) Applicant contends that Singhal does not disclose that the second messaging protocol is different from the first messaging protocol.

In considering C), the Examiner respectfully disagrees. Singhal discloses the need to have wireless and wired capability in an access point that can enforce quality of service metrics. Wired and wireless protocols use different messaging protocols. Hence the need for an access point that can support both.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHILIP J. CHEA whose telephone number is (571)272-3951. The examiner can normally be reached on M-F 6:30-4:00 (1st Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on 571-272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Philip J Chea
Examiner
Art Unit 2453

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4/27/09

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